Helpdesk / Technical Support Details

Swann Technical Support

All Countries E-mail: tech@swannsecurity.com

Telephone Helpdesk

USA toll free
1-800-627-2799
(Su, 2pm-10pm US PT)
(M-Th, 6am-10pm US PT)
(F 6am-2pm US PT)

USA Exchange & Repairs
1-800-627-2799 (Option 1)
(M-F, 9am-5pm US PT)

AUSTRALIA toll free
1300 138 324
(M 9am-5pm AUS ET)
(Tu-F 1am-5pm AUS ET)
(Sa 1am-9am AUS ET)

NEW ZEALAND toll free
0800 479 266

INTERNATIONAL
+61 3 8412 4610

See http://www.worldtimeserver.com for information on time zones and the current time in Melbourne, Australia compared to your local time.

Warranty Information

Swann Communications USA Inc.
12636 Clark Street
Santa Fe Springs CA 90670
USA

Swann Communications PTY. LTD.
Building 4, 650 Church Street,
Richmond, Victoria 3121
Australia

Swann Communications warrants this product against defects in workmanship and material for a period of one (1) year from it's original purchase date. You must present your receipt as proof of date of purchase for warranty validation. Any unit which proves defective during the stated period will be repaired without charge for parts or labour or replaced at the sole discretion of Swann. The end user is responsible for all freight charges incurred to send the product to Swann's repair centres. The end user is responsible for all shipping costs incurred when shipping from and to any country other than the country of origin.

The warranty does not cover any incidental, accidental or consequential damages arising from the use of or the inability to use this product. Any costs associated with the fitting or removal of this product by a tradesman or other person or any other costs associated with its use are the responsibility of the end user. This warranty applies to the original purchaser of the product only and is not transferable to any third party. Unauthorized end user or third party modifications to any component or evidence of misuse or abuse of the device will render all warranties void.

By law some countries do not allow limitations on certain exclusions in this warranty. Where applicable by local laws, regulations and legal rights will take precedence.

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Swann™
Advanced security made easy™

MDV-450
Action Camera™

Operating Instructions

SW361-MDS
www.swannsecurity.com

SR361-MDS-60001-280909

Before You Begin

- **FCC Verification:**
  NOTE: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  · Reorient or relocate the receiving antenna
  · Increase the separation between the equipment and the receiver
  · Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
  · Consult the dealer or an experienced radio/TV technician for help

- **IMPORTANT NOTE: Prohibition against eavesdropping**
  Except for the operations of law enforcement officers conducted under lawful authority, no person shall use, either directly or indirectly, a device operated pursuant to the provisions of this Part for the purpose of overhearing or recording the private conversations of others unless such use is authorized by all of the parties engaging in the conversation.

- **WARNING:** Modifications not approved by the party responsible for compliance could void user's authority to operate the equipment.

- **IMPORTANT SAFETY INSTRUCTIONS:**
  · Make sure product is fixed correctly and stable if fastened in place
  · Do not operate if wires and terminals are exposed

Technical Specifications

MDV-450 *Action Camera*

Video	
Video Format	AVI
Resolution	640 x 480
Video Size	4710kbps
Photo Format	JPEG
Photo Resolution	2048 x 1536 (interpolated)
Image File Size	Approx. 700KB
Audio	
Microphone	Yes (built in)
Audio Range	2m (under typical conditions)
Recording	
Recording Mode	Manual / Continuous
Frame Rate	24fps
Storage Type	MicroSD Card
Storage Capacity	Up to 8GB
Storage Time	Approx. 30min/GB
General	
Battery Type	Rechargeable Lithium-Ion 490mAH
Record Time per Charge	90 mins
Charging Method	USB (via computer)
Dimensions	3.5" x 1.2" x 1.2" 90mm x 30mm x 30mm

Troubleshooting

Problem: The *Action Camera* won't turn on.
Solution: The most likely culprit is the battery. Check out the instructions on page 5 regarding charging the battery. Try completely charging the battery. When doing so, avoid using a USB hub - some USB hubs will not provide a full 5V to attached devices and thus will not charge the battery properly. You can also charge the *Action Camera* from a stand-alone USB charger.

Problem: I've recorded videos, but the microSD card seems to be blank.
Solution: Chances are that this problem is caused by turning the *Action Camera* off before the video files have been properly saved to the microSD card. Always use the Rec/Pause button to stop recordings and waiting until the green light has gone out before turning the *Action Camera* off.

Problem: My videos and pictures seem blurry.
Solution: The lens of the Action Camera is protected by a small glass cover - this is protected itself by the adhesive lens protection film. First, ensure that this is removed. If the glass cover on the lens becomes dirty, then this will cause a large part (or all) of the image captured by the *Action Camera* to be distorted, soft and blurred. Clean the glass lens cover using a dedicated lens cleaning cloth and lens cleaning solution. By unscrewing the front part off the *Action Camera*, you can extract the glass lens cover if this makes cleaning it easier. Be careful if you take the glass lens cover off not to allow dust or moisture into the lens itself.

Problem: My videos seem too shaky.
Solutions: As a general rule, this usually indicates that the mount you've used for the camera (or arm, if you're shooting hand-held) needs to be more stable. One option is to mount the *Action Camera* on the sturdiest platform you can find. Of course, when you've got the camera strapped to your bike and you're riding down the steep side of a mountain, neither yourself nor the bike are going to be particularly stable! As a rule, action video is energetic, frantic and really, really shaky. Check out extreme sports videos shot with self-mounted cameras - a shaky image is pretty much par for the course. In fact, the frantic movement often makes them more exciting and dynamic!

Problem: I'm worried that the recording might skip if the *Action Camera* is bumped or knocked too hard.
Solution: It's really hard to mess up the *Action Camera*. Whilst we certainly don't recommend throwing, dropping or hitting the *Action Camera*, it doesn't have any moving parts and is therefore somewhat resistant to shocks and bumps. The most fragile part of the *Action Camera* is the glass lens cover. Try not to allow this to become scratched or broken - it protects the lens, after all!

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Package Contents

- MDV-450 *Action Camera*
- Clip-On Viewfinder
- USB 2.0 Cable
- Suction Grip Stand
- Handlebar Mounting Clasp
- Head Strap
- 2GB *microSD* Card

If any of these items are missing or damaged,
please contact *Swann* Technical Support for assistance.

Overview

Congratulations on your purchase of the *Action Camera* – the most **convenient** way to shoot **action** video.

This tiny unit is a fully self contained **camera** and **recording** system, capable of producing a very high standard of video for a unit of its size. It has a built in Lithium-ion battery, records to Micro-SD memory cards and connects to your PC or laptop computer via a standard USB 2.0 connection!

You can **mount** the *Action Camera* on the handlebars of your bike, **stick** it to your car's windshield, or **strap** it to your head – whatever you need to do to chase that **perfect shot**! We've included all the mounting **hardware** you need to strap, stick and sling the *Action Camera* onto just about anything.

So – grab your gear… and **stick a camera on it**.

Layout

1.	Rec/Pause Button	(makes it start or stop recording)
2.	Micro SD Card Slot	(with a MicroSD Card hanging out)
3.	Mini-USB Connection	(for plugging into things like PCs)
4.	On / Off Switch	(turns the power on and off)
5.	Removable Screw Cap	(protects electronic bits)
6.	Lens	(point at what you want to shoot)
7.	Stand with Suction Grip	(for sticking to things like glass)
8.	Head Strap	(for strapping to your head)
9.	Handlebar Clip	(mounts on things like handlebars)
10.	Viewfinder	(finds the right view)
11.	USB 2.0 Cable	(plugs things into other things)

Additional Functions

Time Stamp

The *Action Camera* can stamp the time and date onto the upper right corner of photos and video recordings. This can be useful if you're using the *Action Camera* as a diary camera, or need to prove that at half past four on Friday afternoon you actually were hurling yourself out of a perfectly good light aircraft.

To setup the Time Stamp function:

- Connect the Action Camera to your computer.
- Create a .TXT file using a standard text editor (such as Notepad).
- The only information to include in the .TXT file is the full time and date, formatted as follows: YYYY-MM-DD HH:MM:SS
- When entering the value for hours, use 24 hour time. (eg. 4:00pm = 16:00)
- When entering a time or date which only has one digit, be sure that it is preceded by a "0". For example, rather than entering "9", enter "09".

For example, if it was half past four in the afternoon of the twenty-fifth of September 2009, the file would read:

`2009-09-25 16:30:00`

- Save this file as "userconf.txt". Do not call it anything else, or format it to be anything other than a standard text file.
- Copy this file to the root directory of the *Action Camera*.

Using the *Action Camera* as a PC Camera

You can use the *Action Camera* as a standard USB 1.1 PC camera, and use it in much the same way that you would use a standard webcam. To activate the *Action Camera* in PC camera mode:

- Insert the included CD-ROM into your computer. Follow the prompts to install the *Action Camera* software and drivers.
- Once the software has been installed, connect the USB 2.0 cable to a free USB port on your computer.
- Press and hold the Rec/Pause button.
- Whilst the Rec/Pause button is held down, connect the USB 2.0 cable to the *Action Camera*.
- Your operating system will then automatically detect the new hardware, and configure it as appropriate.

Playback

In order to playback files recorded on the *Action Camera*, you just need to get those files onto a computer. There are two ways of doing this.

To connect the *Action Camera* to a PC as an external storage device:
By connecting the *Action Camera* in this way, it will be detected by your computer as an external USB storage device, much like a USB flash drive.

- Ensure the power button on the *Action Camera* is turned OFF.
- Connect the *Action Camera* to your PC via the USB 2.0 cable.
- Your operating system should detect the *Action Camera* automatically.
- Access your files in the same way that you would access files from any other USB drive.

To retrieve files directly from the microSD card:
If you have a card reader capable of reading microSD cards, or have a microSD to SD or USB adaptor, then:

- Eject the microSD card from the rear of the *Action Camera*.
- Insert the microSD card into a card reader or adaptor (as required).
- Connect the card reader/adaptor to your computer.
- The microSD card will be detected by your operating system as an external flash drive.
- Open and access this drive the same way you would access a typical USB flash drive.

Opening files:
The microSD card, whether you access it via the *Action Camera* or via a card reader, will contain two folders, one named AVI and one named JPG.

The **AVI folder** contains your recorded **videos**, as .AVI files. These can be played by a standard video player, such as Media Player or Quicktime. They can also be copied and pasted like any other file. If you wish to copy them to a DVD, you'll need to get dedicated DVD burning software, as the file format is not compatible with most standard DVD players.

If you have problems playing any of the .AVI files, we suggest using VLC Media Player. This is a free player which can play just about anything. Grab it online, from http://www.videolan.org/vlc/

The **JPG folder** contains all your **photographs**, as .JPG files. JPG is a very standard file format, and the most popular format for pictures shown on the Internet. Almost all computers and computer-like devices (such as newer video game consoles or even advanced mobile phones) can open and display JPG files with no additional software.

Preparing the Action Camera

Your *Action Camera* is almost ready to go right out of the box, we just need to remove the adhesive lens protector, **install the MicroSD card** and **charge the built-in battery**.

Removing the Adhesive Lens Protector
Locate the small tab on the corner of the lens. Pull on this, and peel the protective film from the front of the lens.

Installing the SD Card
The *Action Camera* can record video to a Micro-SD card, and is compatible with both standard SD cards and the newer SDHC (High Capacity) cards also. It can take Micro-SD cards ranging from 128MB right up to 8GB. Obviously, the bigger the card you put in it, the more video you can record to it!

To install or change your Micro-SD card:

1. Unscrew the cap from the rear of the *Action Camera*
2. To remove a Micro-SD card, press in to release the locking mechanism, and it'll pop out of the spring-loaded mechanism.
3. If you haven't got long enough fingernails, you may need to use a thin object (thin, not sharp!) such as a paperclip to get to the card. Alternately, find someone with fingernails or stop biting yours.
4. Insert the new SD card, with the connections facing inwards towards the *Action Camera*, and down towards the USB port and power switch. Basically, it only goes in one way – don't force it if it resists. SD cards are pretty robust but they're not invincible, and neither is the SD slot on the *Action Camera*.
5. Insert the Micro-SD card until it 'clicks' into position.
6. Screw the end cap back onto the *Action Camera*.

Charging the Built-In Battery
We charge them up before we ship 'em out but, due to time in transit en route to you, **it'll need to be recharged before you put the *Action Camera* through its paces**. Oh, and you'll want to **leave it charging until it's completely full**, especially the first time – otherwise, the battery might be damaged.
Think of it like it's a camel – it'll go the distance, but it needs to fully stock up its metaphorical hump before travelling!

To charge the battery:

1. Unscrew the screw cap, exposing the ON/OFF switch and USB port.
2. Ensure that the ON/OFF switch is set to OFF (if it's ON, a computer will detect it as a USB Mass Storage Device rather than just charge it up).
3. Connect the USB port on the *Action Camera* to a free USB port on your computer.
4. The miniature lithium-ion battery built into your *Action Camera* will give you approximately 1 - 2 hours of recording time.
5. Whilst the *Action Camera* is charging, the RED light will stay lit to let you know it's working.

Whilst **charging**, the **RED light** will **stay lit**.

When the **battery** is **running low**, the **RED light will FLASH**.

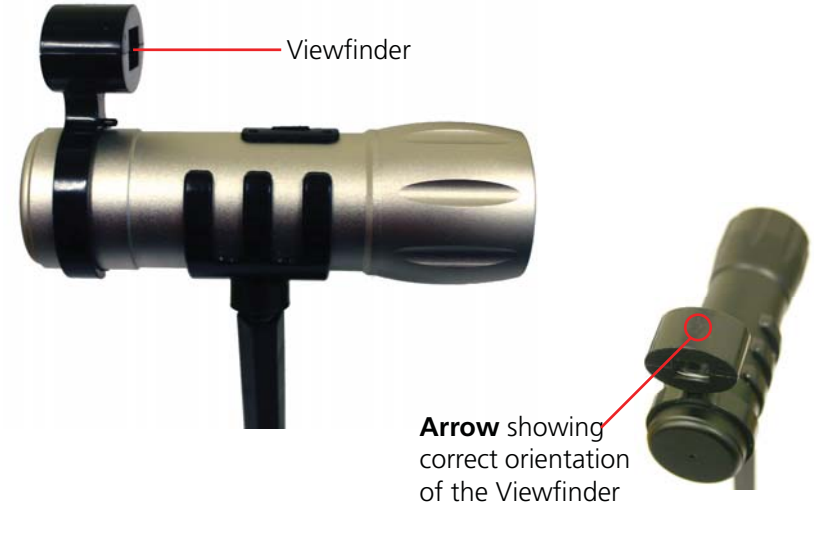
Mounting the *Action Camera*...

Aiming the Action Camera

You gotta know what you're shooting, right? As there is no screen on the *Action Camera* (we'd have put one on, but they're a bit too bulky and a lot too fragile!) **we've included a detachable viewfinder**.

To get a look at what the *Action Camera* will see from a mounted position:

1. Take the detachable viewfinder, and slip onto the *Action Camera*. It easiest to slide it on over the rear cap.
2. Slide the detachable viewfinder to the rear of the *Action Camera* - it will lock into position in the groove towards the back of the camera.
3. Put your eye as close to the viewfinder as possible.
4. The area you see in focus through the viewfinder will be the field of view of the camera.



Tips and Tricks:

- The **arrow** on the top of the viewfinder should **point towards** whatever you want to shoot.
- **The viewfinder should be aligned as close to straight as possible** – use the Rec/Pause button on the top of the *Action Camera* as a reference – it's directly on the top of the camera.
- It's always a good idea to do a couple of 'test runs' before shooting something that matters to you. Though the *Action Camera* is an easy to use bit of hardware, it can be a little tricky to get the knack of early on. Practice makes perfect!

Video Mode

To start a video recording, press the Rec/Pause button whilst in Video Mode.

The **GREEN light** will turn **on** – this indicates that **the *Action Camera* is preparing to record**.

After a few seconds, the **GREEN light** will start **flashing**. This indicates that **you are currently recording video**.

To stop a recording, press the Rec/Pause button. The **GREEN light** will now stay **lit**. This means that **the *Action Camera* is writing data to the MicroSD card**.

Note: If a single, unbroken video file reaches 2GB (approximately 1 hour of recording time) then the Action Camera must stop recording for a moment in order to write data to the microSD card. There will be a several second pause, after which the Action Camera will continue recording to a new file automatically.

Photo Mode

To take a photograph, press the Rec/Pause button whilst in Photo Mode.

The **GREEN light** will turn **on** – this indicates that **the *Action Camera* has captured an image,** and is currently **saving that image to the microSD card**.

After a few seconds, the **GREEN light** will turn **off**. This indicates that **the Action Camera is ready to take another photograph.**

Note: When using Photo Mode, it's really important to **keep the *Action Camera* steady whilst taking a picture**. If the camera is **moving**, then the image the *Action Camera* captures is likely to be **blurry**.

Recording Modes

The *Action Camera* has two modes: **Video Mode** and **Photo Mode**.

Video Mode allows you to shoot moving videos, which are saved to the microSD card as .AVI files. Whilst in Video Mode, the BLUE and ORANGE lights will stay ON.

Video Mode

In **Photo Mode** the *Action Camera* will take single still images, which are saved to the microSD card as .JPG files. Whilst in Photo Mode, the BLUE light only will be ON.

Photo Mode

Selecting your Mode:

After turning the *Action Camera* on:

1. Wait until the BLUE and ORANGE lights are both ON. This indicates that you are in Video Mode.
2. To change to Photo Mode, press and hold the Rec/Pause button for three seconds.
3. The ORANGE light will go out, and the BLUE light will stay on. This indicates that you are in Photo Mode.
4. To change back to Video Mode, press and hold the Rec/Pause button for three seconds. The ORANGE light will come back on, indicating the mode has changed back to Video Mode.
5. Each time you turn on the *Action Camera*, it will automatically enter Video Mode, regardless of the mode it was in when turned off.

IMPORTANT:
Do NOT turn the Action Camera OFF whilst you are recording video or capturing a still image (basically, any time that the GREEN light is ON).

If the *Action Camera* is turned off whilst writing a file to the microSD card then the file will not be saved properly. In some cases, this can corrupt the file structure of the microSD card, effectively erasing other recordings. Always use the Rec/Pause button to stop recording before turning the *Action Camera* off!

...on a Windshield/Window

To record either what's going on inside or outside of the car, you can **mount the *Action Camera* to the windshield** or to a window using the included stand with suction-grip.

To mount the suction-grip stand:

1. **Find a flat, glass surface** to mount the suction-grip on.
2. **Clean the glass using a glass cleaner** or cleaning alcohol, and a soft, lint free cloth. Clean suction cup with same method. Allow both to dry completely. The **cleaner both surfaces** are, the **better the** suction cup will **stick**.
3. Make sure that the lever on the suction-grip is released (aimed UP).
4. **Press** the suction cup **firmly against the surface** you wish to stick it to.
5. Press the **lever down to lock** into position.
6. **Check the integrity** of the suction-grip's hold by gently pulling and tapping the stand.
7. If it is secure, mount the *Action Camera* into position, and **aim** it as required.

To release the suction-grip:

1. Remove the *Action Camera* from the stand.
2. Move the lever to the released (UP) position.
3. **Pull the small tab** on the side of the suction-grip.

Tips and Tricks:

- For the safety of your *Action Camera*, we strongly suggest mounting the suction-grip stand **inside the vehicle** only! If it does come unstuck, you don't want to run over it with your car (it's tough, but not that tough).
- You can use the same mechanism to attach the suction-grip stand to any **flat**, **clean**, **nonporous** surface. However, **exercise caution**: many surfaces don't offer as reliable a surface as glass to mount the suction-grip to.

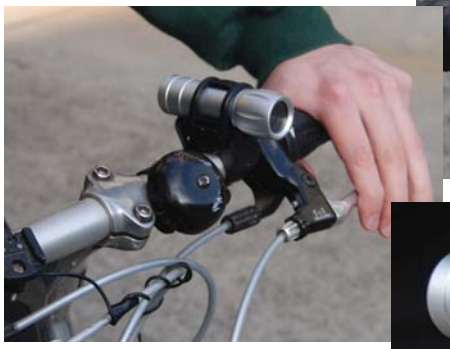
...on Handlebars

If you're using the *Action Camera* to record your bicycling adventures, it's often a better idea to **mount the *Action Camera* to your handlebars** than to your body. Mounting the *Action Camera* to the handlebars will ensure that the camera's view stays upright, and doesn't wind up looking down at the road or up at the sky depending on the angle of your neck!

1. Undo the bottom strap of the handlebar clip.
2. Place over handlebars, lining up the groove in the clip to sit in.
3. Attach the strap so the clip is secure in place, but not so tight that the strap will break or stretch.
4. Once you're satisfied the clip is secure, attach the *Action Camera* using the second strap on the top.

Tips and Tricks

- Many handlebars are not exactly straight, rather they are curved. This is not a problem. Once you mount the handlebar clip, you can pivot the top half of the clip to face the way you want.
- Mount the *Action Camera* so that the Rec/Pause button is covered by the tab in the centre of the top strap. This means that the button is protected from being accidentally bumped and your recording halted prematurely.



If required, you can twist the *Action Camera* slightly to compensate for the curvature of your handlebars

...on your Head

The head strap which came with your *Action Camera* is a great way to record exactly what you're seeing when your skating, snowboarding, participating in the next extreme ironing championship – whatever floats your boat. Basically, by using a cunning combination of practical design and some elastic, the *Action Camera* head strap lets you strap the *Action Camera* to your head.

To use the *Action Camera* with the head strap:

1. Before attaching the *Action Camera* to the head strap, try the head strap on. Get a feel for the shape and size of the head strap.
2. To figure out which way around the head strap should be worn, the three adjustable clasps go towards the back.
3. Adjust the size and feel of the head strap with the three clasps. Ideally, the head strap should be tight enough to the head to prevent unwanted movement, whilst loose enough to be comfortable.
4. Locate the two elastic rings, located on the left hand side of the head strap (whilst worn). Move them to the location that you'd like to mount the *Action Camera*.
5. Push the *Action Camera* through the elastic loops, and secure the *Action Camera* in place with one elastic loop around the front and one elastic loop around the back of the *Action Camera*. It should be a tight fit!

Tips and Tricks

- Make sure you mount the *Action Camera* the right way up. Even a slight angle can seem quite dramatic when you play your footage back! The easiest way to ensure this is to check that the Rec/Pause button is facing up.
- When placing the camera in the final position, it can help to use a mirror (or willing accomplice) to make sure that it is facing exactly forward.
- Mount the *Action Camera* far enough forward on your head to avoid shooting your own ear!

The *Action Camera* worn with the head strap fits neatly under most helmets.